

**CLAIMS**

What is claimed is:

- 5        1. In a system for decoding variable length prefix codes in a bit stream, a method comprising:
  - reading, from the bit stream, a number of bits sufficient to store a longest variable length code of the system;
  - selecting a predetermined number of bits from the bits read; and
- 10      obtaining, from a data structure, in accordance with an actual value of the bits selected, at least a decoded value and a validity indicator associated with a variable length code.
- 15      2. The method of claim 1, further comprising applying a prefix oriented decoding method to the bits initially read from the bit stream when the decoded value is indicated to be invalid.
- 20      3. The method of claim 1, wherein reading the number of bits comprises making the specified number of bits accessible for future operations.
4. The method of claim 1, wherein selecting the number of bits comprises making the specified number of bits accessible for future operations, faster than reading the same number of bits.
5. The method of claim 1, wherein the predetermined number of bits comprises the maximal number of bits to be used as an index to the data structure.
6. The method of claim 1, wherein the validity indicator indicates whether the decoded value is valid.
- 25      7. The method of claim 1, wherein the data structure used to obtain at least the decoded value and validity indicator associated with a variable length code comprises a memory area containing at least the decoded value and validity indicator for each bit combination that can be formed from the predetermined number of bits.
- 30      8. The method of claim 2, wherein the prefix oriented decoding method further comprises a method of variable length decoding that employs variable length code prefix properties during decoding.

9. An article comprising: a machine accessible medium having a plurality of machine readable instructions, wherein when the instructions are executed by a processor, the instructions provide for decoding of variable length prefix codes in a bit stream by

reading, from the bit stream, a number of bits sufficient to store a longest variable

5 length code of the system;

selecting a predetermined number of bits from the bits read; and

obtaining, from a data structure, in accordance with an actual value of the bits selected, at least a decoded value and validity indicator associated with a variable length code.

10 10. The article of claim 9, further comprising instructions for applying a prefix oriented decoding method to the bits initially read from the bit stream when the decoded value is indicated to be invalid.

11. The article of claim 9, wherein instructions for reading the number of bits comprise instructions for making the specified number of bits accessible for future operations.

15 12. The article of claim 9, wherein instructions for selecting the number of bits comprise instructions for making the specified number of bits accessible for future operations, faster than reading the same number of bits.

13. The article of claim 9, wherein the predetermined number of bits comprises the maximal number of bits to be used as an index to the data structure.

20 14. The article of claim 9, wherein the validity indicator indicates whether the decoded value is valid.

15 15. The article of claim 9, wherein the data structure used to obtain at least the decoded value and validity indicator associated with a variable length code comprises a memory area containing at least the decoded value and validity indicator for each bit combination that can be formed from the predetermined number of bits.

16. The article of claim 10, wherein prefix oriented decoding method further comprises a method of variable length decoding that employs variable length code prefix properties during decoding.

30 17. A system for decoding variable length prefix codes in a bit stream, comprising:  
logic to read from the bit stream a number of bits sufficient to store a longest variable length code of the system;  
logic to select a predetermined number of bits from the bits read; and

logic to obtain from a data structure, in accordance with the actual value of the bits selected, at least a decoded value and a validity indicator associated with a variable length code.

18. The system of claim 17, further comprising logic to apply a prefix oriented

5 decoding method to the bits initially read from the bit stream when the decoded value is indicated to be invalid.

19. The system of claim 17, wherein logic to read the number of bits comprises logic to make the specified number of bits accessible for future operations.

20. The system of claim 17, wherein logic to select the number of bits comprises

10 logic to make the specified number of bits accessible for future operations, faster than logic to read the same number of bits.

21. The system of claim 17, wherein the predetermined number of bits comprises the maximal number of bits to be used as an index to the data structure.

22. The system of claim 17, wherein the validity indicator indicates whether the

15 decoded value is valid.

23. The system of claim 17, wherein the data structure used to obtain at least the decoded value and validity indicator associated with a variable length code comprises a memory area containing at least the decoded value and validity indicator for each bit combination that can be formed from the predetermined number of bits.

20 24. The system of claim 18, wherein prefix oriented decoding method further comprises a method of variable length decoding that employs variable length code prefix properties during decoding.